SONY

3-751-410-22 (2)

Trinitron® Color TV

KV-20EXR10
KV-27EXR10
KV-27EXR15

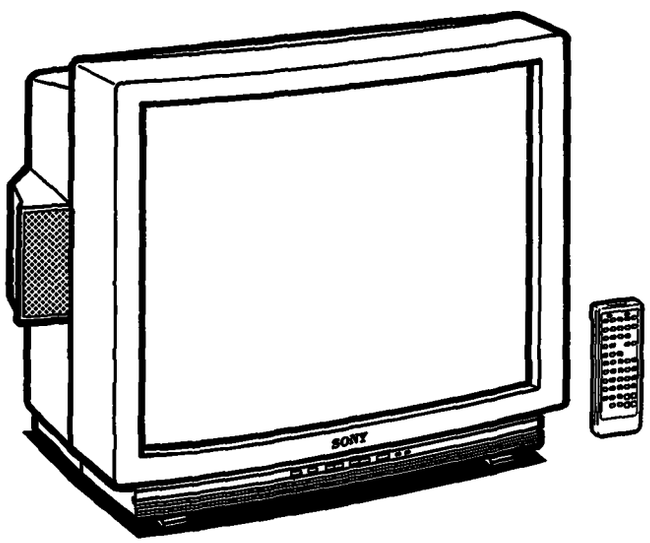
Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Owner's Record

The model and serial numbers are located at the rear of the unit. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____



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WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

Note to CATV system installer in the U.S.A.
This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Use of this television receiver for other than private viewing of programs broadcast on UHF or VHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

Identify Your TV Before Use

In this manual, the instructions are given using the model with maximum functions. Please disregard information in the manual which contradicts with your TV.

First of all, please check the model number of your TV set.
This manual applies to three models and there are slight differences among them. Please check the table below to see what is equipped with your TV before you begin the operation.

Table for each model **YES: equipped** **NO: not equipped**

	KV-20EXR10	KV-27EXR10	KV-27EXR15
Picture-in-picture function	NO	NO	YES
Remote commander	RM-771	RM-771	RM-772

KV-20EXR10 and KV-27EXR10 are only for the customers in the U.S.A.

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General

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Features

This color TV features a Microblack™ TRINITRON® picture tube for a high resolution, high contrast picture.

- **Picture-in-picture feature** lets you watch two pictures at once. TV channel or a video source can be displayed in a box inset into the corner of the main screen. (Only for KV-27EXR15)
- **Surround system** provides you with the sound heard in places such as a concert hall or a movie theater when listening to a stereo sound or an external source.
- **Multi-band VHF/UHF/CATV tuner** receives up to 125 cable channels for a total of 181 possible off-air and cable channels.
- **Built-in Multichannel TV Sound (MTS) decoder** enables reception of stereo programs and Second Audio Program (SAP) broadcasts.
- **S VIDEO IN** jack which is connected to the S video output jack on the VCR allows superior playback pictures.
- **Variable audio output jacks** enable reproduction of TV or video sound through an audio system.
- **VIDEO 2 OUT jacks** allow VCR recording of the picture and sound of the equipment connected to the VIDEO 2 IN jacks.

Supplied Remote Commander provides you with many other convenient features.

- Remote Commander allows you to operate the TV, a Sony VCR and a multi disc player from a distance.
- **Guide function** allows you to set the clock, timer, channel block, while reading the instructions of the on-screen guide.
- **Automatic programming** to preset all receivable channels instantly.
- **JUMP** button enables switching quickly between two channels.
- **Sleep timer** automatically turns off the TV after approximately one hour.
- **Internal clock** for the current time display

And other features for a high quality picture...

- **New Dynamic picture™ system** adjusts picture contrast automatically to produce more detail in both bright and dark areas of every scene.
- **Trinitone™ control** assures accurate, life-like skin tones and pure whites.
- **Colorpure Filter™** produces fine picture detail without color spill or color noise.

Precautions

Safety

- Operate the unit only on 120 V AC.
- One blade of the plug is wider than the other for purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not going to be used for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Never remove the speakers from the unit.

Installing

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the unit in a hot or humid place or in a place subject to excessive dust or mechanical vibration.

Cleaning

Clean the unit with a dry soff cloth. Never use strong solvents such as thinner or benzine as they might damage the finish of the cabinet.

Repacking

Retain the original carton and packing materials for safe transport of this unit in the future.

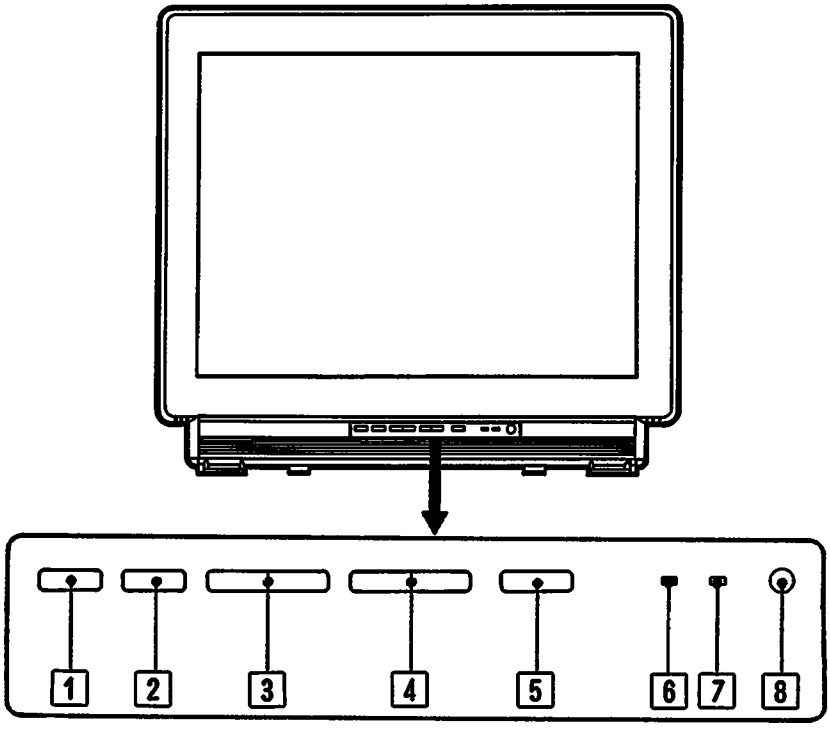
If you have any questions or problems concerning your unit, please contact your nearest Sony dealer.

For details safety precautions, see the leaflet "IMPORTANT SAFEGUARDS".

Location of Controls

Refer to the pages indicated in ● for details.

Front panel



[1] KV-20EXR10/27EXR10: **SURROUND button** ㉔
KV-27EXR15: **PIP button** ㉑

[2] **TV/VIDEO button** ⑬

[3] **VOLUME +/– buttons** ⑲

[4] **CHANNEL +/– buttons** ⑲

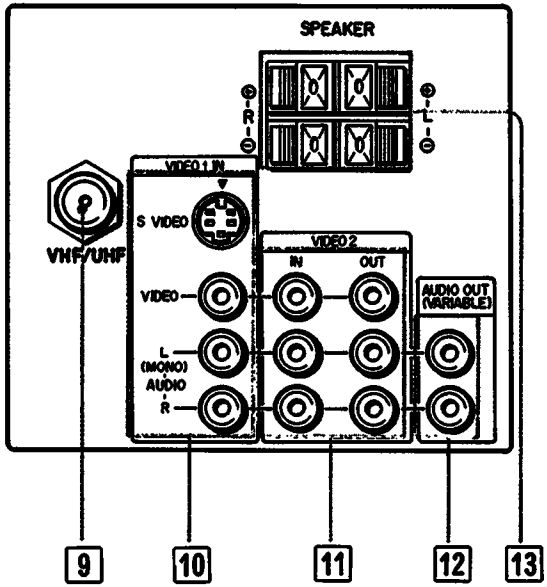
[5] **POWER switch** ⑰

[6] **TIMER indicator** ㉝

[7] **STEREO indicator** ㉔

[8] **Remote control detector**

Rear Panel



9 **VHF/UHF antenna terminal** ⑩

10 **VIDEO 1 IN jacks (S VIDEO, VIDEO/AUDIO)** ⑫

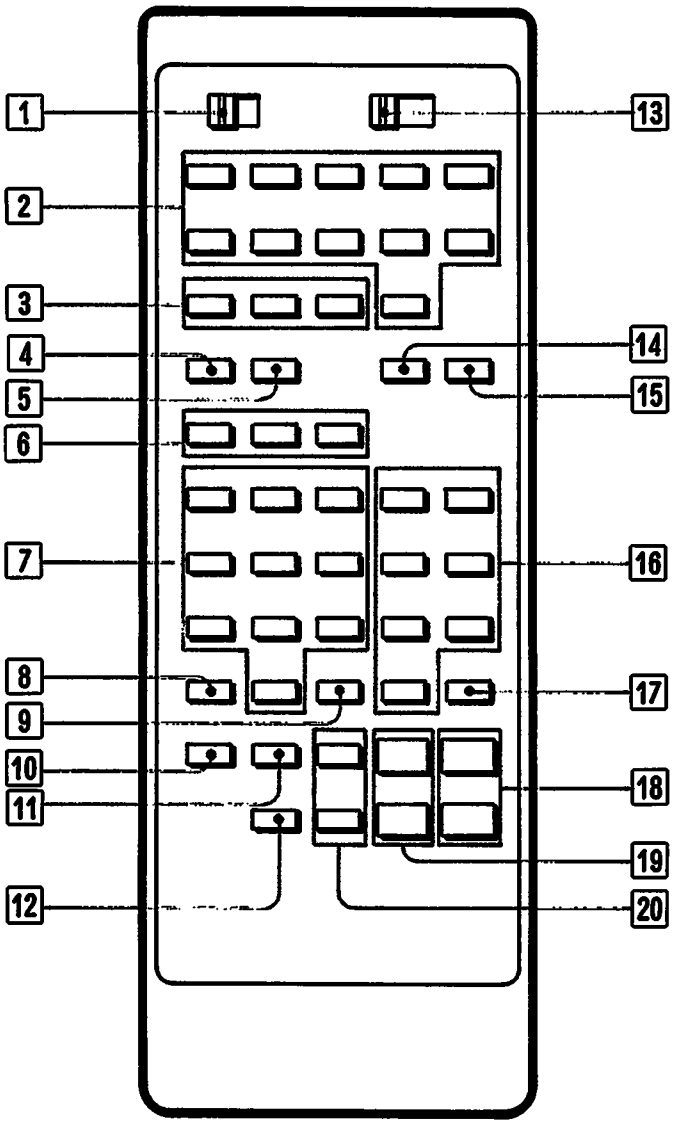
11 **VIDEO 2 IN and OUT jacks** ⑭

12 **AUDIO OUT (VARIABLE) jacks** ⑮

13 **SPEAKER terminals** ⑮

Remote Commander

Refer to the pages indicated in ● for details.



1 **Only for KV-27EXR15**
PIP/VIDEO (picture-in-picture or video) selector ●

2 **Sony VCR/multi disc player operation buttons ●**
Only for KV-27EXR15
Function as buttons for the picture-in-picture operations when PIP is selected. (See page 20.)

3 **Channel presetting buttons ●●**

4 **MUTING button ●**

5 **CABLE button ●**

6 **Input select buttons (TV, VIDEO 1, VIDEO 2)* ●**

7 **Channel number buttons ●**

8 **DISPLAY button ●**

9 **ENTER button ●●**

10 **TIME button ●**

11 **MTS (multichannel TV sound) button ●**

12 **SURROUND button* ●**

13 **VTR 1/2/3/MDP (multi disc player) selector ●**

14 **SLEEP button ●**

15 **POWER button* ●**

16 **A/V WINDOW (audio and video adjusting) buttons ●**

17 **JUMP button ●**

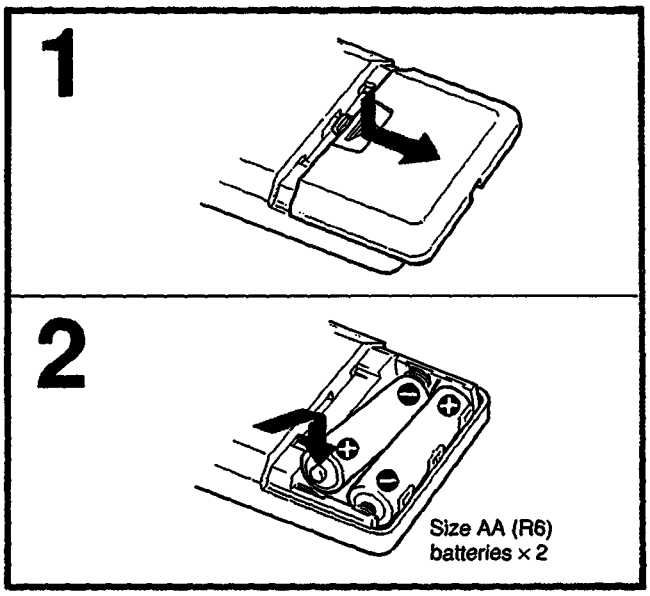
18 **CH (channel) +/– buttons* ●●**

19 **VOL (volume) +/– buttons* ●**

20 **PICTURE +/– buttons ●**

The buttons with * mark have the same function as the buttons with the same or similar mark on the TV. (KV-27EXR15 has a PIP/VIDEO button on the TV, too instead of a SURROUND button.)

Installing Batteries



Battery life
In normal operation, batteries will last up to half a year. If the unit does not operate properly, the batteries might be exhausted. Replace both with new ones.

To avoid damage from possible battery leakage
Remove the batteries when the Remote Commander will not be used for a long time.

Connecting the TV Antenna/Cable

Either an indoor antenna or outdoor antenna can be connected. For better quality picture, connecting an outdoor antenna is recommended.

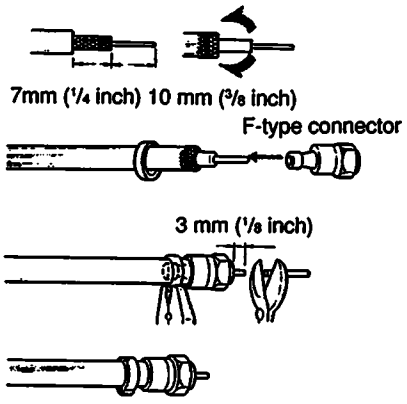
Cable TV reception is only possible by connecting a cable supplied by your local cable company.

To Connect a VHF, UHF, or VHF/UHF Combination Antenna* or CATV Cable

1 Check the cable type and prepare the cable end using the appropriate connector.

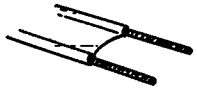
75-ohm coaxial cable (round)

Attach an F-type connector (not supplied).

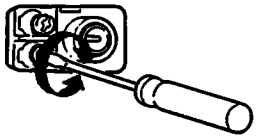


300-ohm twin-lead cable (flat)

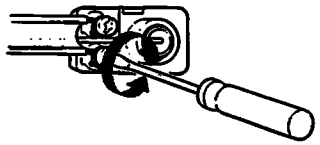
Attach the supplied antenna connector.



Loosen with a screwdriver.

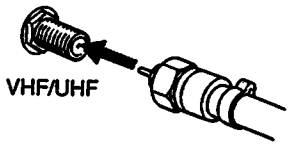


Attach the cable and fasten with a screwdriver.

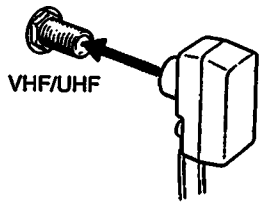


2 Plug the connector into VHF/UHF on the rear of the TV.

75-ohm coaxial cable (round)



300-ohm twin-lead cable (flat)



* Most combination antennas are equipped with a signal splitter. Remove the splitter and attach the appropriate connector.

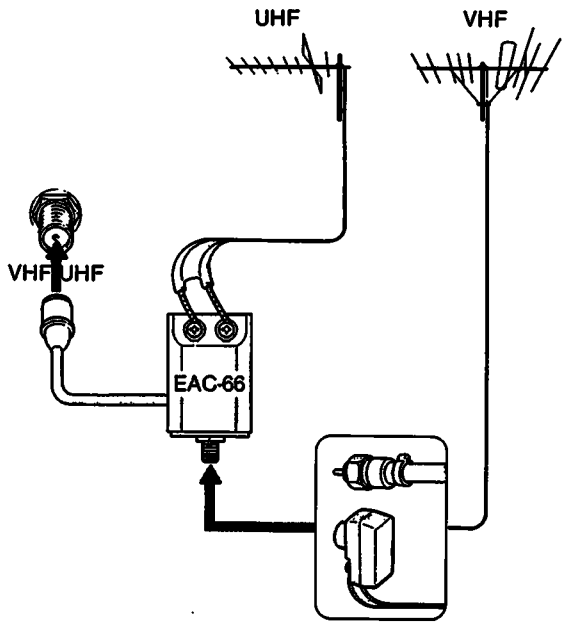
When you connect both VHF and UHF antennas

Use the EAC-66 U/V mixer (not supplied).

1 **Prepare the VHF antenna end using the appropriate connector.**

2 **Connect the cables to the mixer.**

3 **Plug the mixer to VHF/UHF.**



When the U/V mixer is used
Snow and noise may appear in the pictures of the cable TV channels over 37 (W+1).

* The special converter/decoder will be supplied by the cable company.

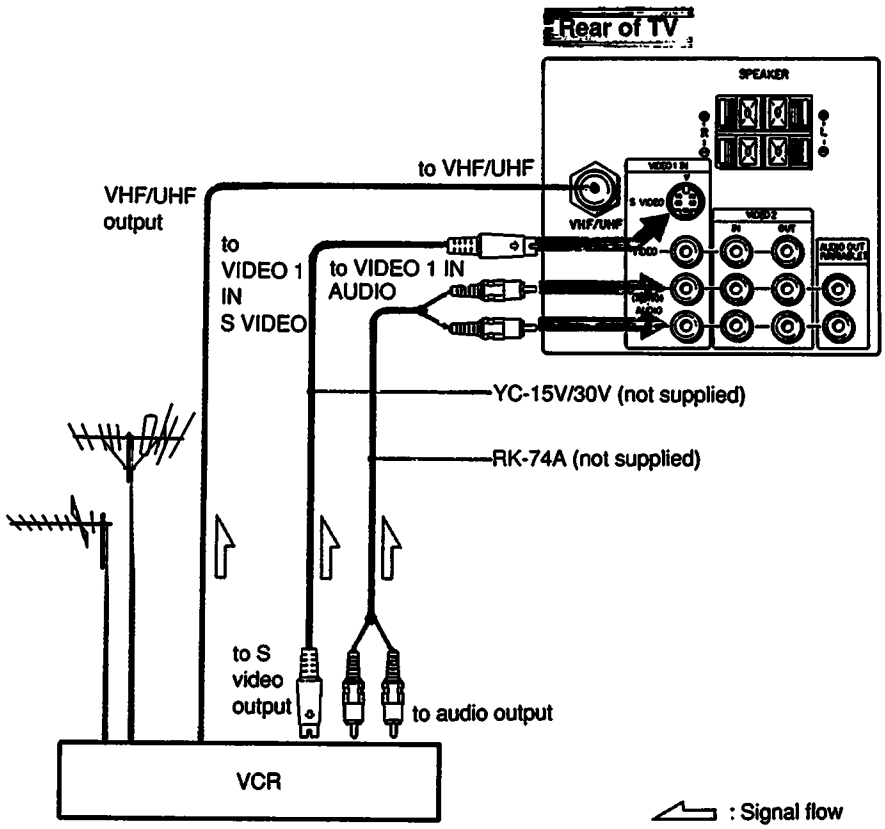
Connecting Other Equipment

Connecting a VCR

With this connection, you will be able to...

—View the playback of video tapes
—Record TV programs
—Record a TV program while viewing another

1 Connecting a VCR with an S video output jack



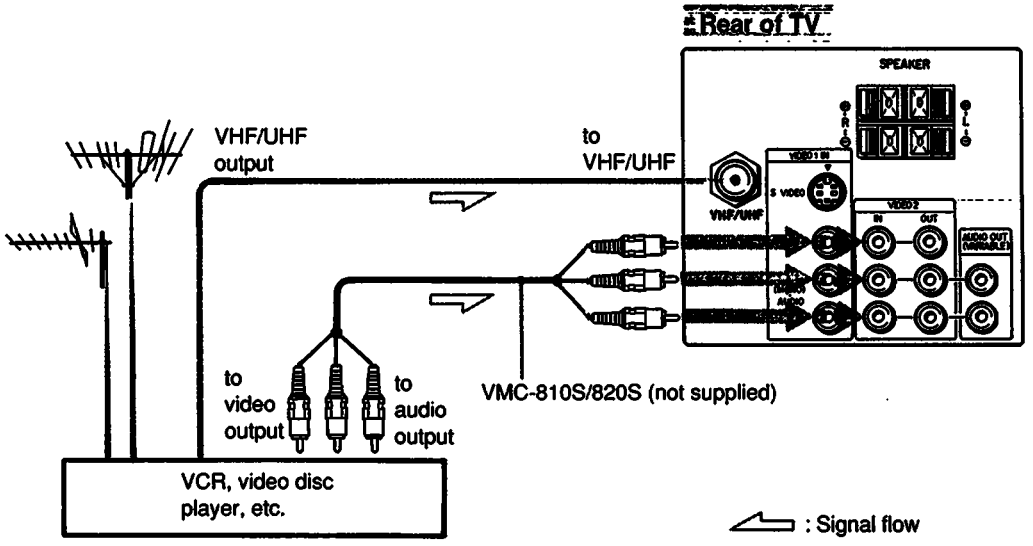
Notes

- If you connect a monaural VCR, connect the audio output of the VCR to the L (MONO) jack of VIDEO 1/2 IN of the TV. The monaural sound will be heard from both speakers.
- For operation, refer to the instruction manual furnished with the VCR.
- Keep the VCR away from the TV if the picture or sound is affected.

About S video input

Video input and output signals can be separated into Y (luminance or brightness) and C (chroma or color) signals.
Usually these two signals are combined in a VCR and sent as one signal to a TV. Separation of the Y and C signals prevents them from interfering with one another, thereby improving picture (especially in color) quality.
This unit is equipped with an S video input jack through which these separated signals can be input directly.

2 Connecting a VCR/video disc player, etc. not equipped with an S video output jack



Preparations

1 **Turn on the TV.**

2 **Press the TV/VIDEO button on the TV or an input select button on the Remote Commander so that the "VIDEO 1" or "VIDEO 2" indication appears on the screen.**

VIDEO 1: for equipment connected to VIDEO 1 IN
VIDEO 2: for equipment connected to VIDEO 2 IN

Operation

When using a Sony infrared remote control VCR, video disc player or multi disc player, the equipment can be operated with the Remote Commander supplied with the TV.

1 **Set the VTR 1/2/3/MDP selector to the desired position according to the equipment to be operated.**

VTR 1: Sony Betamax VCR
VTR 2: Sony 8 mm VCR
VTR 3: Sony VHS VCR
MDP: Sony video disc player or multi disc player

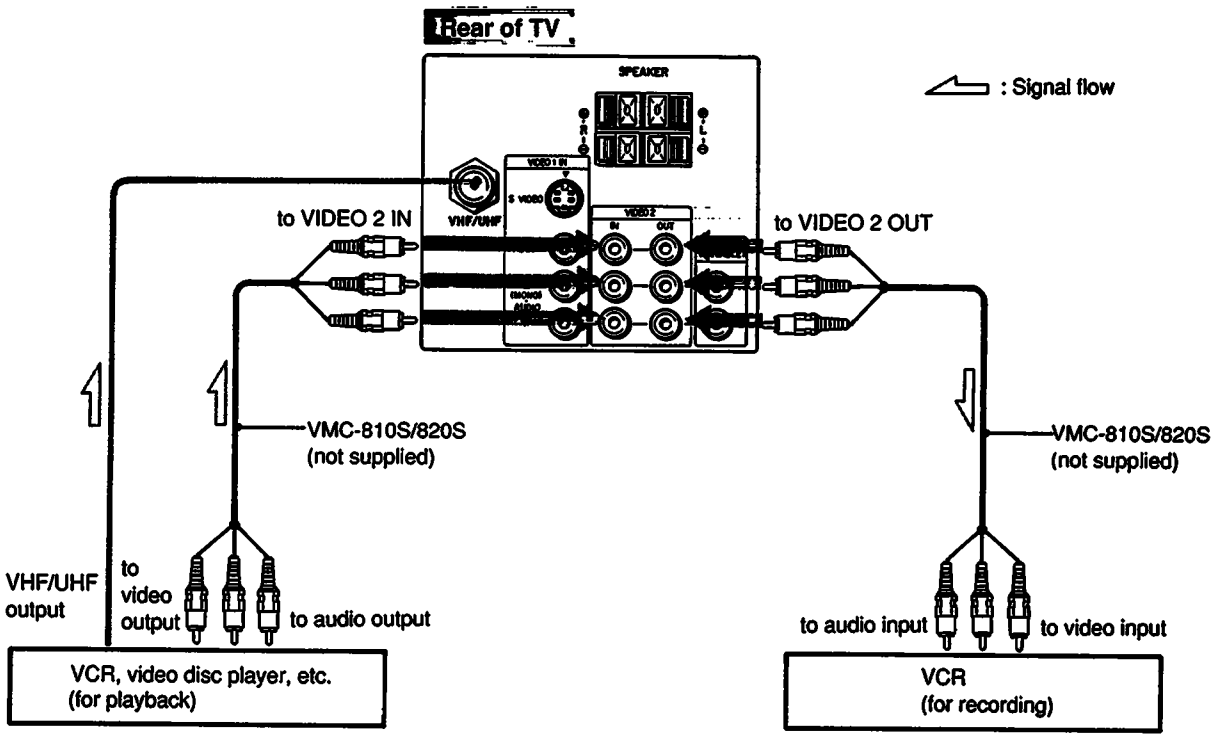
2 **Press the VCR/multi disc player operation button on the Remote Commander.**

To return to the TV mode
—Press the TV/VIDEO button on the TV so that a channel number appears on the screen.
—Press the TV button on the Remote Commander.

To view one TV program while recording another
Press the TV/VTR mode select button on the VCR or Remote Commander so that the VCR will be in the TV mode. Press the TV button on the Remote Commander, and select the channel you want to view.

When you cannot obtain a clear picture and/or sound
Make sure that the TV/VTR mode select button on the VCR is set to TV. Reselect the desired channel with the buttons on the TV or the Remote Commander.

Connecting Two VCRs for Tape Editing



Operation

1 **Press TV/VIDEO on the TV or VIDEO 2 on the Remote Commander so that the "VIDEO 2" indication appears on the screen.**

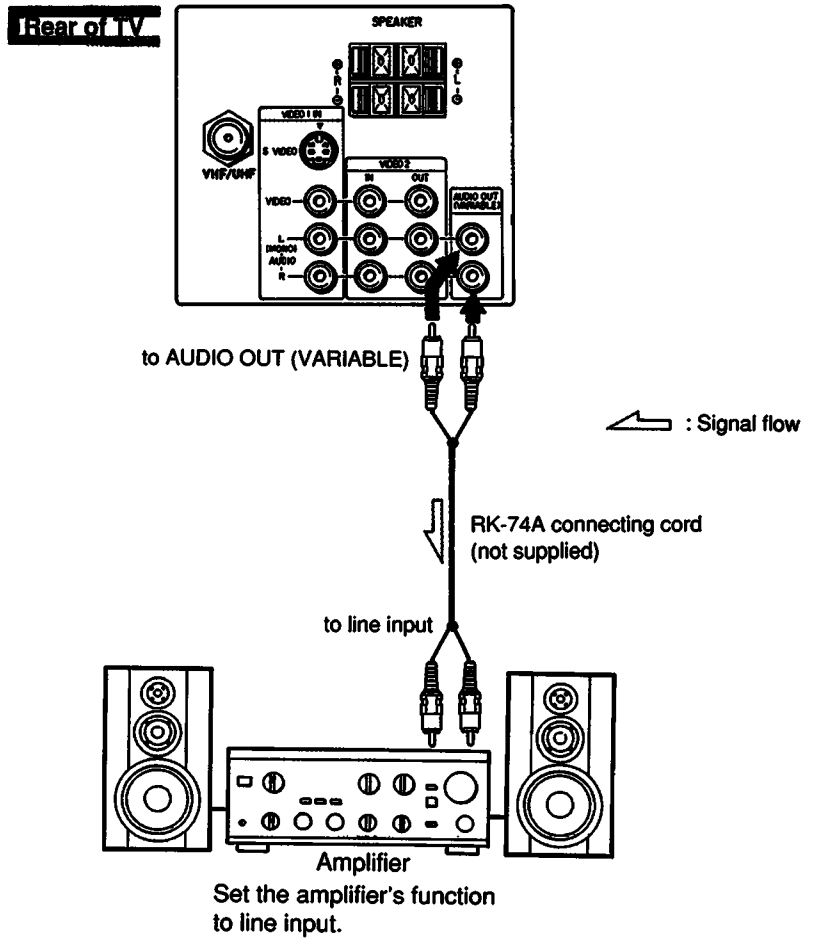
2 **Set the playback VCR to the playback mode and the recording VCR to the recording mode.**

Note on tape editing

The video signal input from the equipment connected to the VIDEO 2 IN jacks is directly output from VIDEO 2 OUT even when the TV is OFF. The video signal input from VIDEO 1 IN is not output from VIDEO 2 OUT. To edit the tape, use the VIDEO 2 IN and OUT jacks.

Connecting an Audio System

—To listen to the TV or connected VCR sound through an audio system



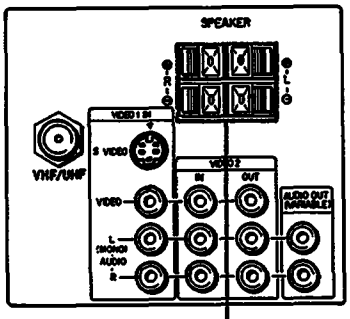
To adjust the sound level

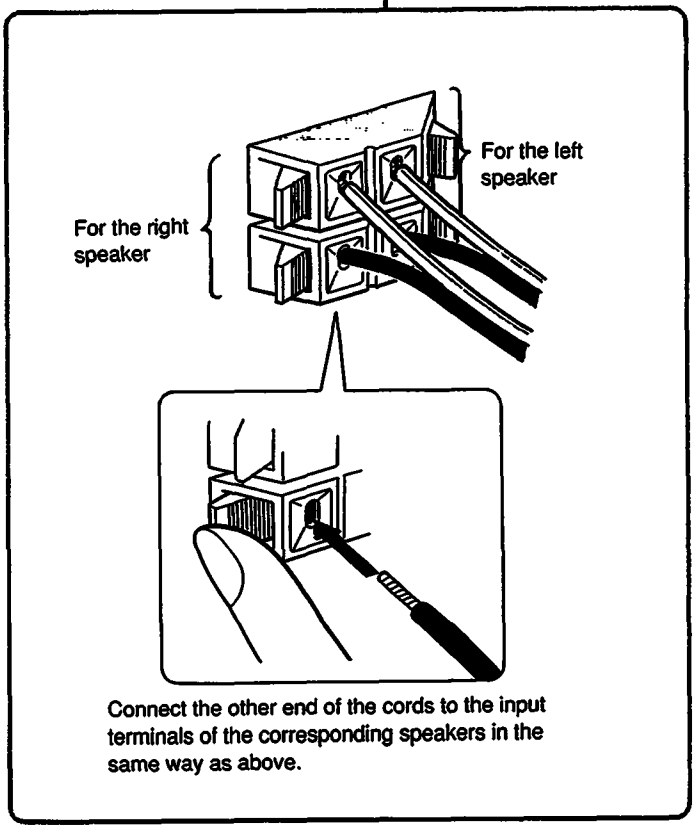
Leave the amplifier volume, bass and treble controls at their mid position and adjust the level with the VOLUME buttons on the TV or the VOL buttons on the Remote Commander.

When an audio system is connected to AUDIO OUT
Press AUDIO on the Remote Commander repeatedly until the "SPEAKER ON" indication is selected on the screen and press [–] to display the "SPEAKER OFF" indication.
The sound from the TV's speakers will be cut off when the "SPEAKER OFF" indication appears.

Connecting Extra (not supplied) External Speakers

Rear of TV





Connect the other end of the cords to the input terminals of the corresponding speakers in the same way as above.

Note

Remove the speaker cords of the TV from the SPEAKER terminals before connecting external speakers.

Caution

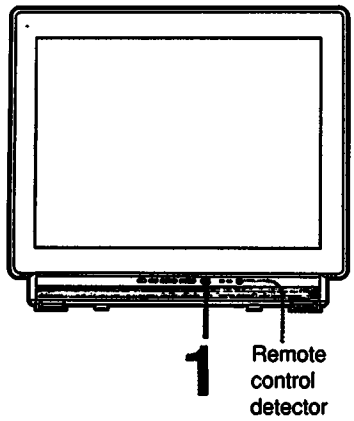
- If you connect external speakers, they must be rated at over 8-ohm impedance (with normal power holding capacity of more than 5 W).
- Do not turn on the TV with the speaker cords exposed. This may cause damage.

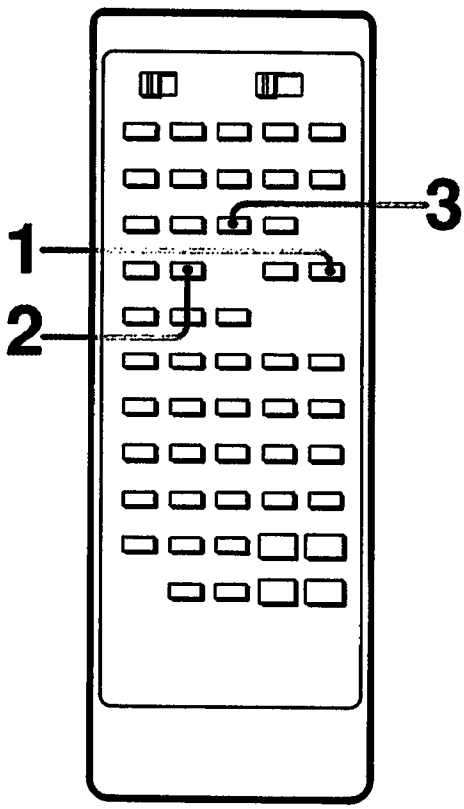
Phasing

Correct ⊕ ⊖ connection of both speaker systems ensures proper in-phase operation. If the speaker system is out-of-phase, the bass tones seem to be missing and the position of the instruments becomes obscure.

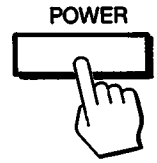
Presetting TV Channels

To Preset TV Channels Automatically

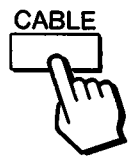


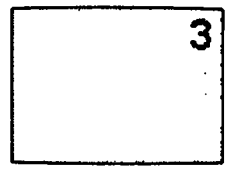


1 **Press POWER on the TV or the Remote Commander to turn the TV on.**

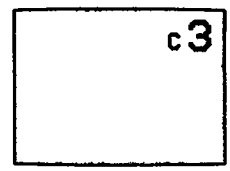


2 **Press CABLE so that the appropriate mode appears.**



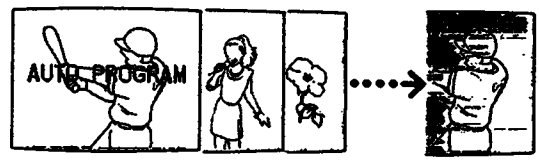


To preset VHF or UHF channels



To preset cable TV channels

3 **Press AUTO PGM.**



"AUTO PROGRAM" is displayed on the screen and receivable channels (other than the channels already preset) will be preset in numerical sequence. The channels previously preset remain in the unit's memory.
When no more channels can be found, the programming stops and the lowest numbered channel is displayed.

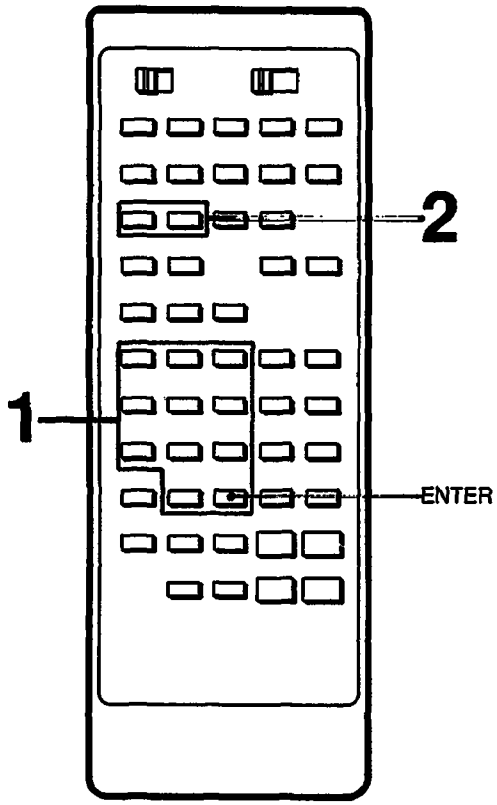
Receivable channels of this TV are:
VHF: 2 – 13
UHF: 14 – 69
Cable: 1 – 125

To add the channels that could not be preset with automatic programming because their signal strength was too weak, or **to erase unnecessary channels**
Follow the steps in "To preset only the desired channels" on the next page.

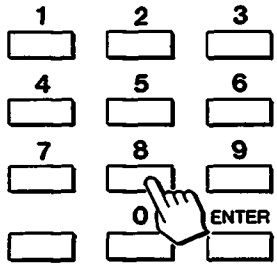
To check preset channels
Press CH +/–.

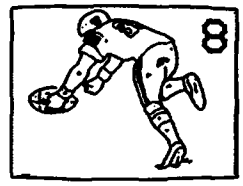
If the "VIDEO 1" or "VIDEO 2" indication is displayed on the screen
Press the TV/VIDEO button on the TV or the TV button on the Remote Commander so that a channel number appears.

To Preset Only the Desired Channels

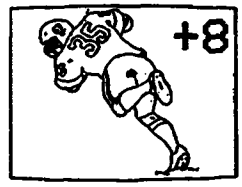


1 **Press the channel number button(s) and then ENTER to select the channel to be added or erased.**



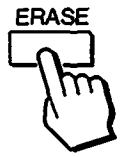


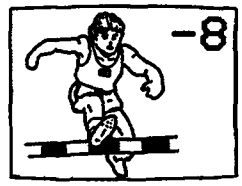
2 **To add channels — Press ADD.**



A "+" appears for a moment.
This channel has now been added to the channel scan memory.

To erase channels — Press ERASE.





A "–" appears for a moment.
This channel has now been erased from the channel scan memory.
The next time the CH +/– button is pressed, this channel will be skipped.

Repeat steps 1 and 2 for other channels to be added or erased.

When a VHF or UHF channel is erased
The cable TV channel with the same number is also erased and vice versa.

Cable TV channel chart*
Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

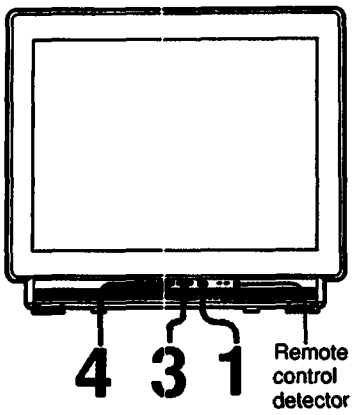
Number on this TV	1	5	6	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Corresponding CATV channel	A-8	A-7	A-6	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q

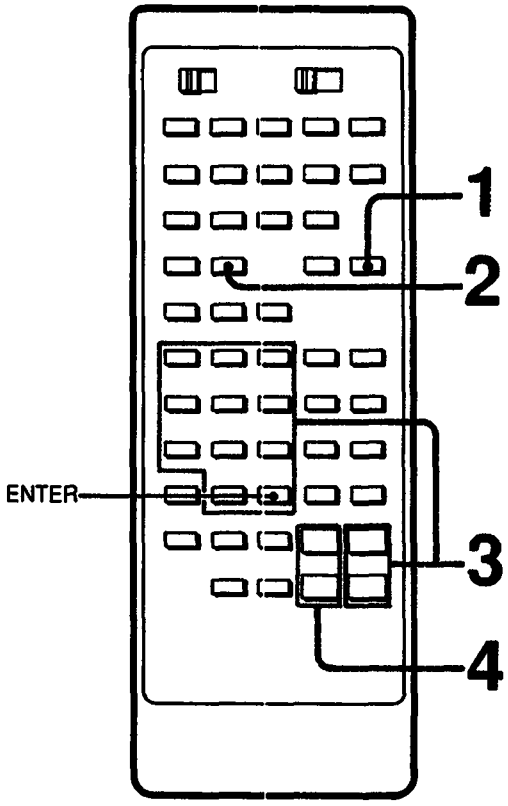
31	32	33	34	35	36	37	38	39	.....	93	94	95	96	97	98	99	100	101	102	.....	123	124	125
R	S	T	U	V	W	W+1	W+2	W+3	.....	W+57	W+58	A-5	A-4	A-3	A-2	A-1	W+59	W+60	W+61	.....	W+82	W+83	W+84

Check with your local cable TV company for more complete information on the available channels.

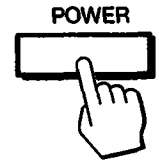
* The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

Watching TV Programs

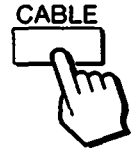


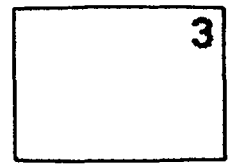


1 **Press POWER on the TV or the Remote Commander to turn the TV on.**

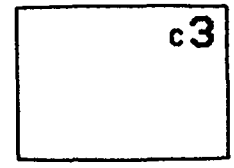


2 **Press CABLE so that the appropriate mode appears.**





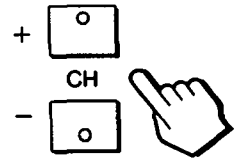
To view VHF or UHF channels



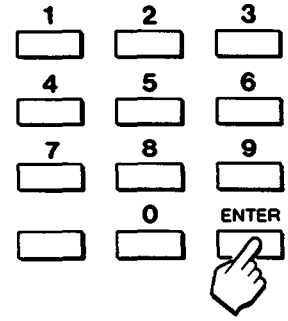
To view cable TV channels

3 **Select a channel in one of the following two ways:**

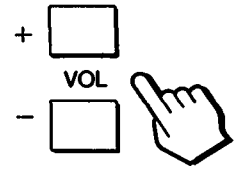
To scan the preset channels in numerical sequence,
press CH +/–.



To select a channel directly, press the channel number button(s) and then ENTER. For example, to select channel 10, press 1, 0 and ENTER.



4 **Press VOL + or – to adjust the volume.**



To turn off the TV
Press POWER on the TV or the Remote Commander again.

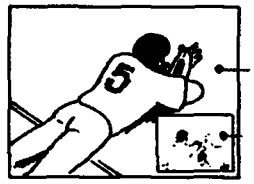
If the "VIDEO 1" or "VIDEO 2" indication is displayed on the screen
Press the TV/VIDEO button on the TV or the TV button on the Remote Commander so that a channel number appears.

Enjoying the Picture-in-picture Feature (Only for KV-27EXR15)

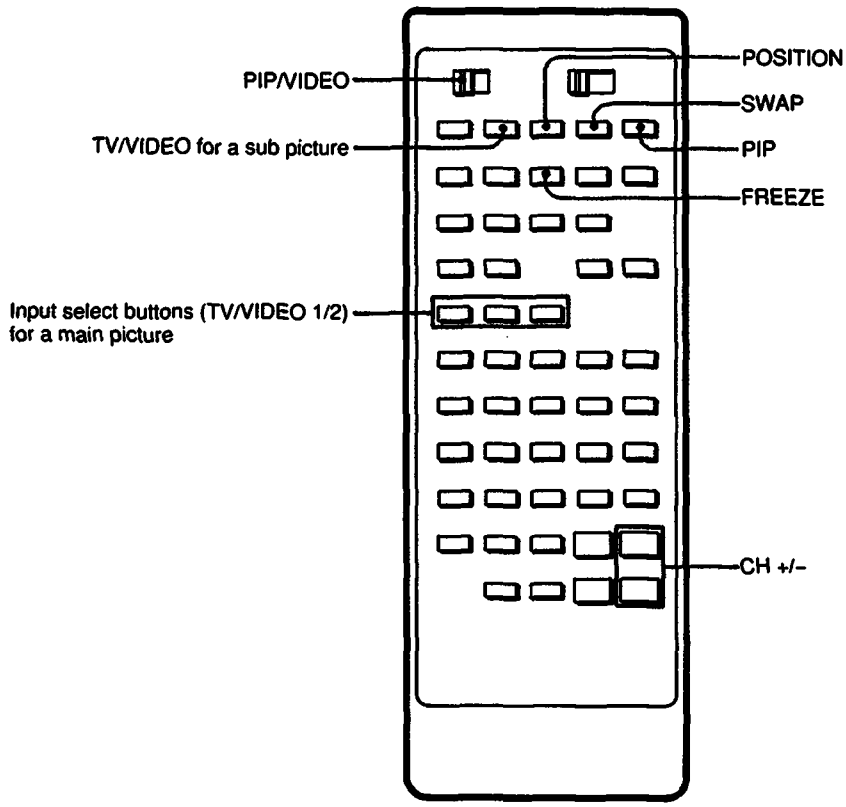
This function is equipped only with KV-27EXR15.

Besides the main picture, you can watch a video source simultaneously as a sub picture.

You can enjoy the convenience of the picture-in-picture feature when you want to watch a TV program while watching another video source from connected equipment (VCR, video disc player, etc.). If you connect a VCR, you can watch two different TV programs at the same time.



Buttons used for picture-in-picture operations

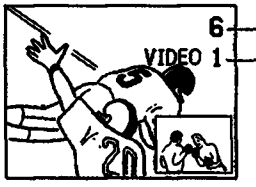


Note
If the main picture is blocked, picture-in-picture does not function.
(See page 35.)

To display a sub picture

1 **Set the PIP/VIDEO selector to PIP.**

2 **Press PIP.**



Input source mode or TV channel for the main picture

Input source mode or TV channel for the sub picture

The sub picture in the last mode you watched will appear.
Picture-in-picture also functions when the main picture is in the VIDEO mode.

To make the sub picture disappear
Press PIP again.

To scan programs of a sub picture
Press CH +/– on the Remote Commander.

To change the mode of a sub picture
Press TV/VIDEO on the Remote Commander.
Each time this button is pressed, TV, VIDEO 1 or VIDEO 2 mode will be selected in sequence.

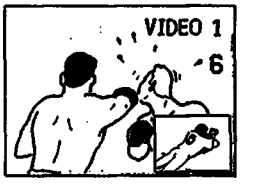
Notes on the sub picture
- The sound of the sub picture cannot be heard.
- If a sub picture is blocked, the "BLOCKED" indication will appear on the main screen.

To swap the main and the sub pictures

1 **Set the PIP/VIDEO selector to PIP.**

2 **Press PIP to display a sub picture.**

3 **Press SWAP.**

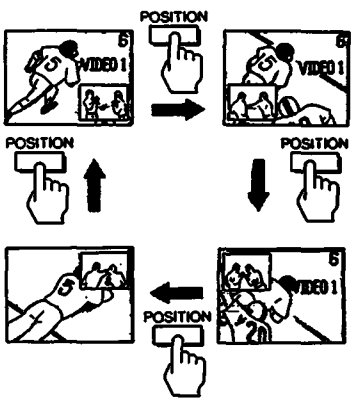


To change the position of the sub picture

1 **Set the PIP/VIDEO selector to PIP.**

2 **Press PIP to display a sub picture.**

3 **Press POSITION.**
Each time POSITION is pressed, the sub picture moves as illustrated.



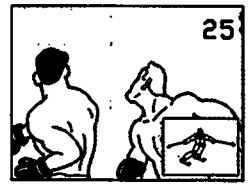
To freeze a sub picture

The sub picture can be frozen.
Freezing the picture is convenient to write down a recipe of cooking program or a displayed toll free number, etc.

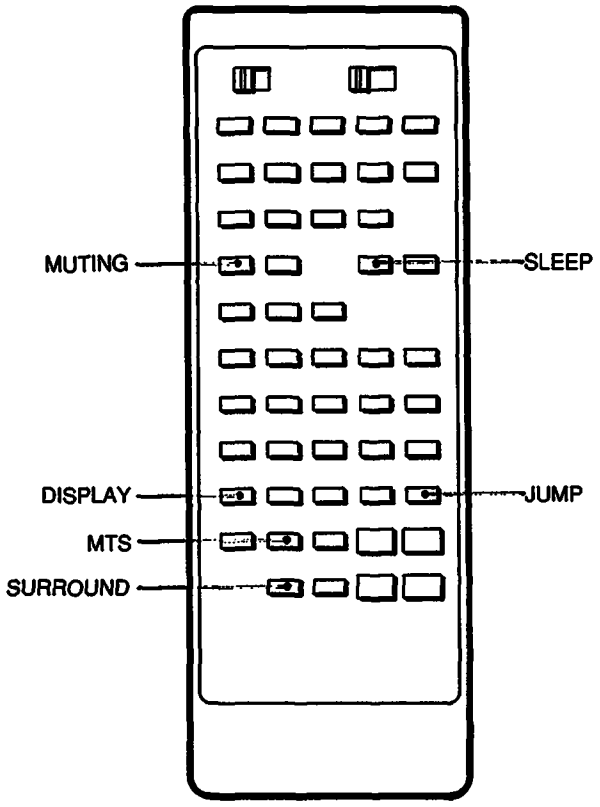
1 **Set the PIP/VIDEO selector to PIP.**

2 **Press PIP to display a sub picture.**

3 **Press FREEZE.**
The sub picture is frozen.



To restore the normal picture
Press FREEZE again.



Muting the sound

Press MUTING.
The "MUTING" indication will appear on the screen.
To restore the sound, press MUTING again or VOL +.

Keeping the channel displayed

Press DISPLAY.
To make the channel display disappear, press DISPLAY again.

Receiving a Multichannel TV Sound (MTS) program

Each time **MTS** is pressed, MAIN, SAP (Second Audio Program), or MONO is selected in sequence.
To listen to stereo sound, select the MAIN mode so that the on-screen MAIN indication appears.
The STEREO indicator on the TV lights up whenever a stereo broadcast is received.
When the reception of the stereo sound is noisy, select the MONO mode. The reception will be easy at the sacrifice of the stereo effect.

Listening to surround sound

Press SURROUND.
The " " indication appears on the screen for a few seconds.
A surround sound effect will be obtained for stereo broadcasts or external stereo sources.
To release the surround sound effect, press SURROUND again so that the " " indication appears.

Using the SLEEP timer

Press SLEEP.
The TV will be turned off automatically after about 1 hour.
The green "SLEEP ON" indication will appear on the screen for a few seconds and the red "SLEEP" indication will appear one minute before the TV is turned off automatically.
To cancel the SLEEP timer, press SLEEP again so that the green "SLEEP OFF" indication appears on the screen, or turn off the TV.

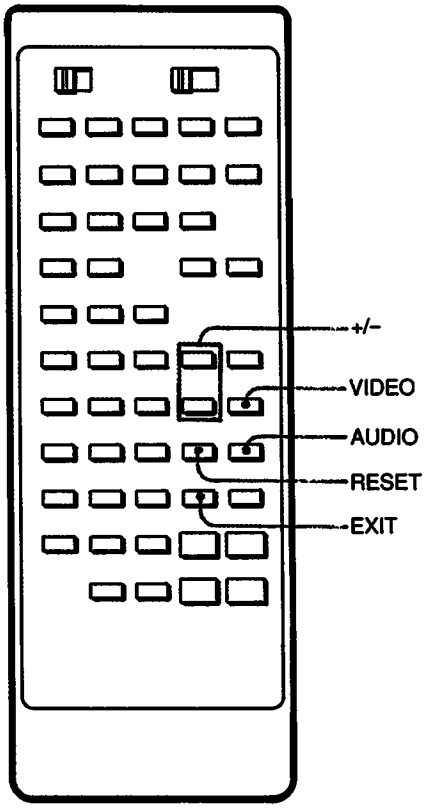
Switching quickly between two channels

Press JUMP.
Each time JUMP is pressed, the channel which appeared on the screen directly before is recalled.
This button enables you to keep track of two programs alternately.

Adjusting the Picture and Sound

You can adjust the picture and sound levels and have the unit store them for each input mode (TV/VIDEO 1/2).

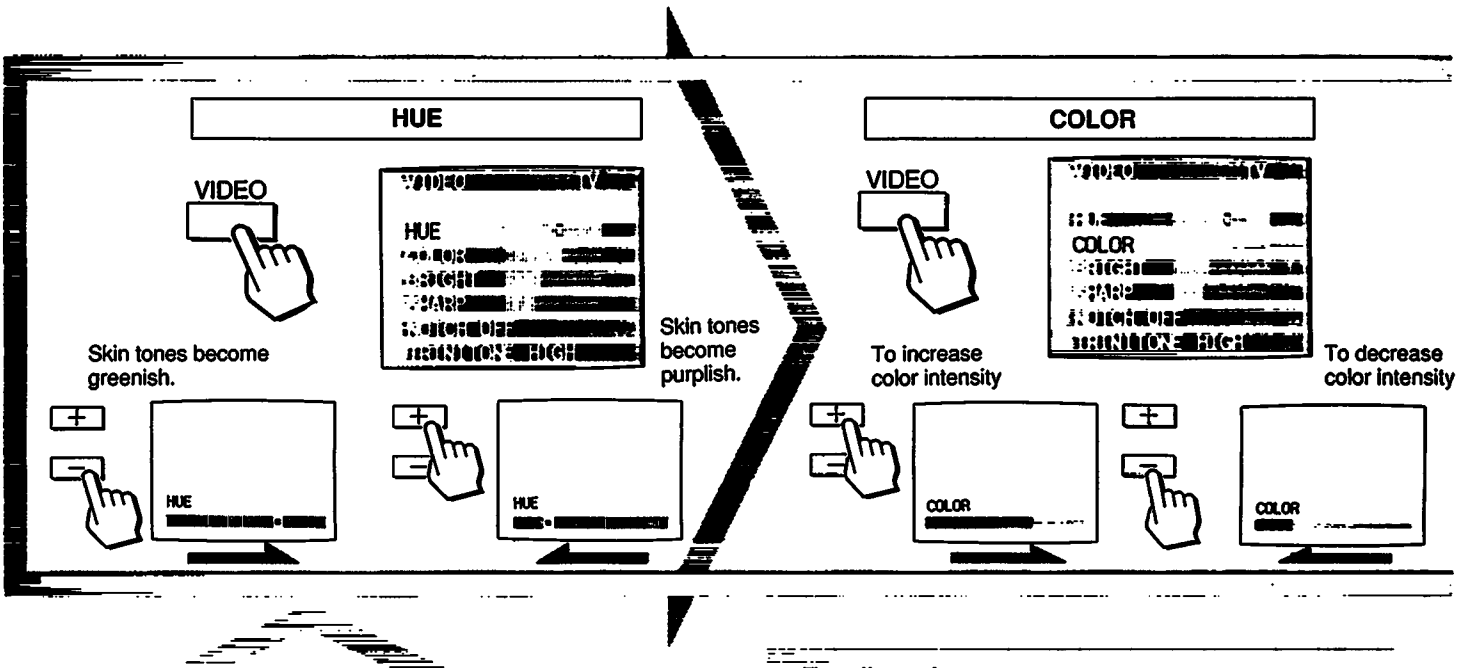
Buttons used for adjustment



For operation, see the next pages.

Adjusting the Picture

Press VIDEO repeatedly until the on-screen display of the item to be adjusted appears.

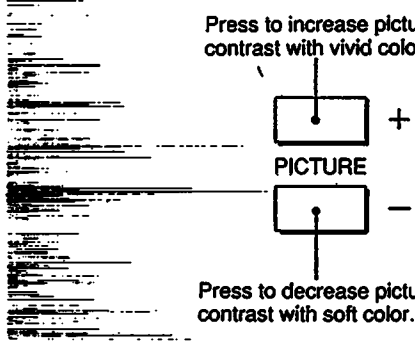


To restore the factory preset levels
Press RESET.
The adjustment levels will be cleared at once.

To restore the normal picture
Press EXIT.

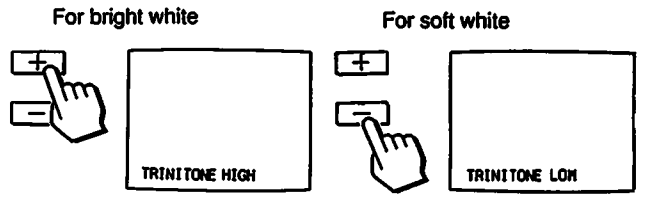
Only for KV-27EXR15
The SHARPNESS control is not operable for a sub picture.

To adjust picture contrast



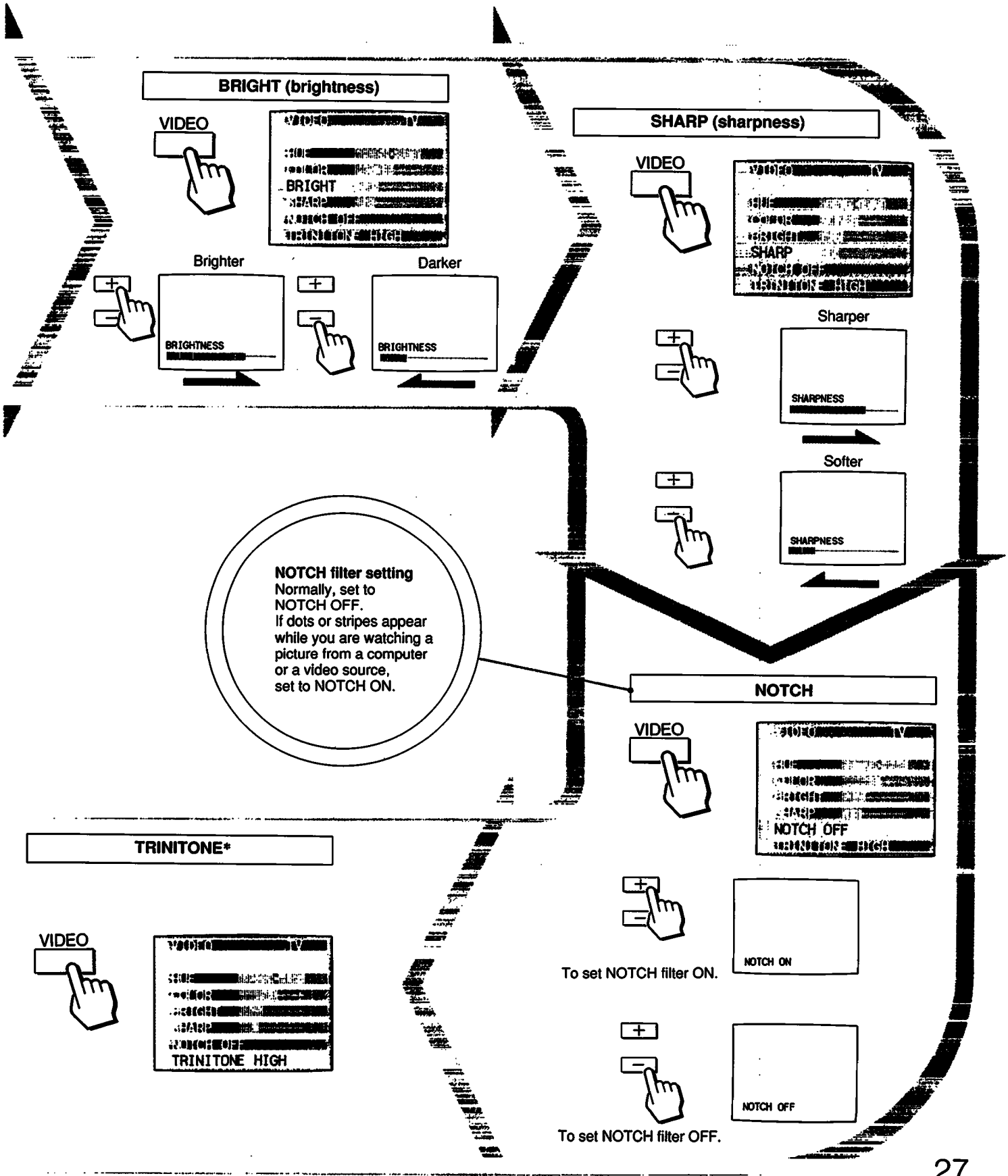
The picture contrast level cannot be memorized under each input mode.

* **TRINITONE adjustment**
Usually color picture tubes are manufactured with a fixed color temperature (tint) that determines the "warmness (reddish)" or "coolness (bluish)" of the picture it produces. With Sony's Trinitone feature, you can adjust the color of the picture to your preference.



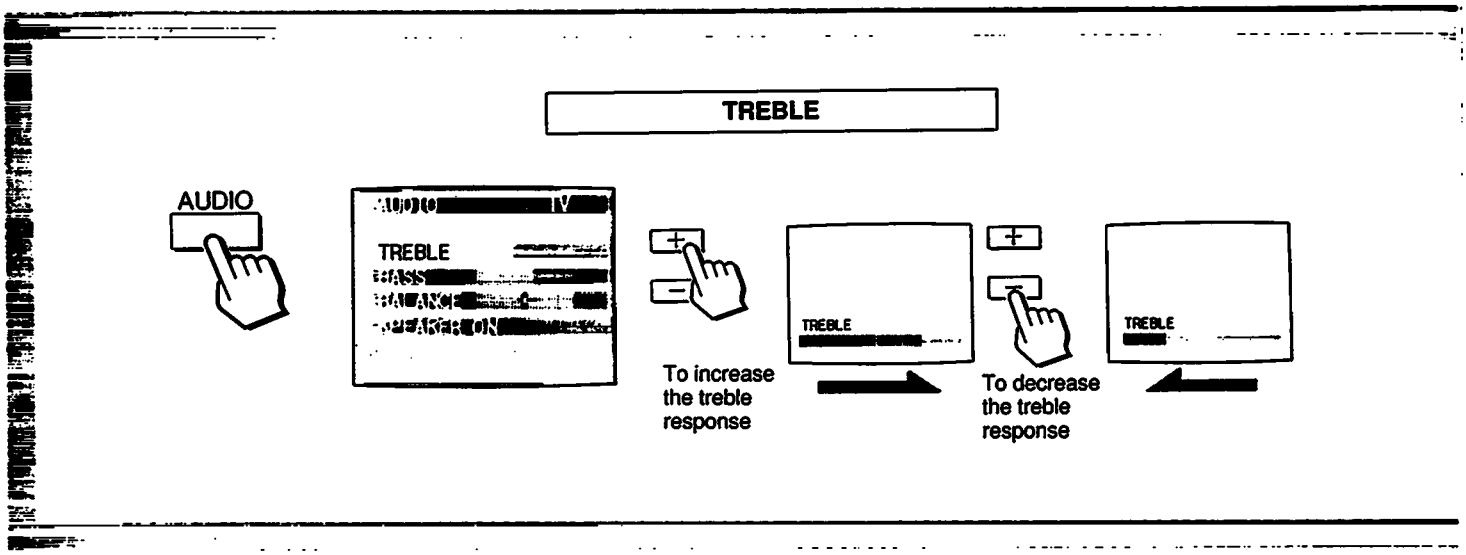
TRINITONE HIGH
The factory preset whiteness level will be restored.

TRINITONE LOW
A touch of red will be added to the white part of the picture


BRIGHT (brightness)
VIDEO
BRIGHT
Brighter
Darker
BRIGHTNESS
BRIGHTNESS
SHARP (sharpness)
VIDEO
SHARP
Sharper
SHARPNESS
Softer
SHARPNESS
NOTCH filter setting
Normally, set to NOTCH OFF.
If dots or stripes appear while you are watching a picture from a computer or a video source, set to NOTCH ON.
NOTCH
VIDEO
NOTCH OFF
NOTCH ON
To set NOTCH filter ON.
NOTCH OFF
To set NOTCH filter OFF.
TRINITONE*
VIDEO
TRINITONE HIGH

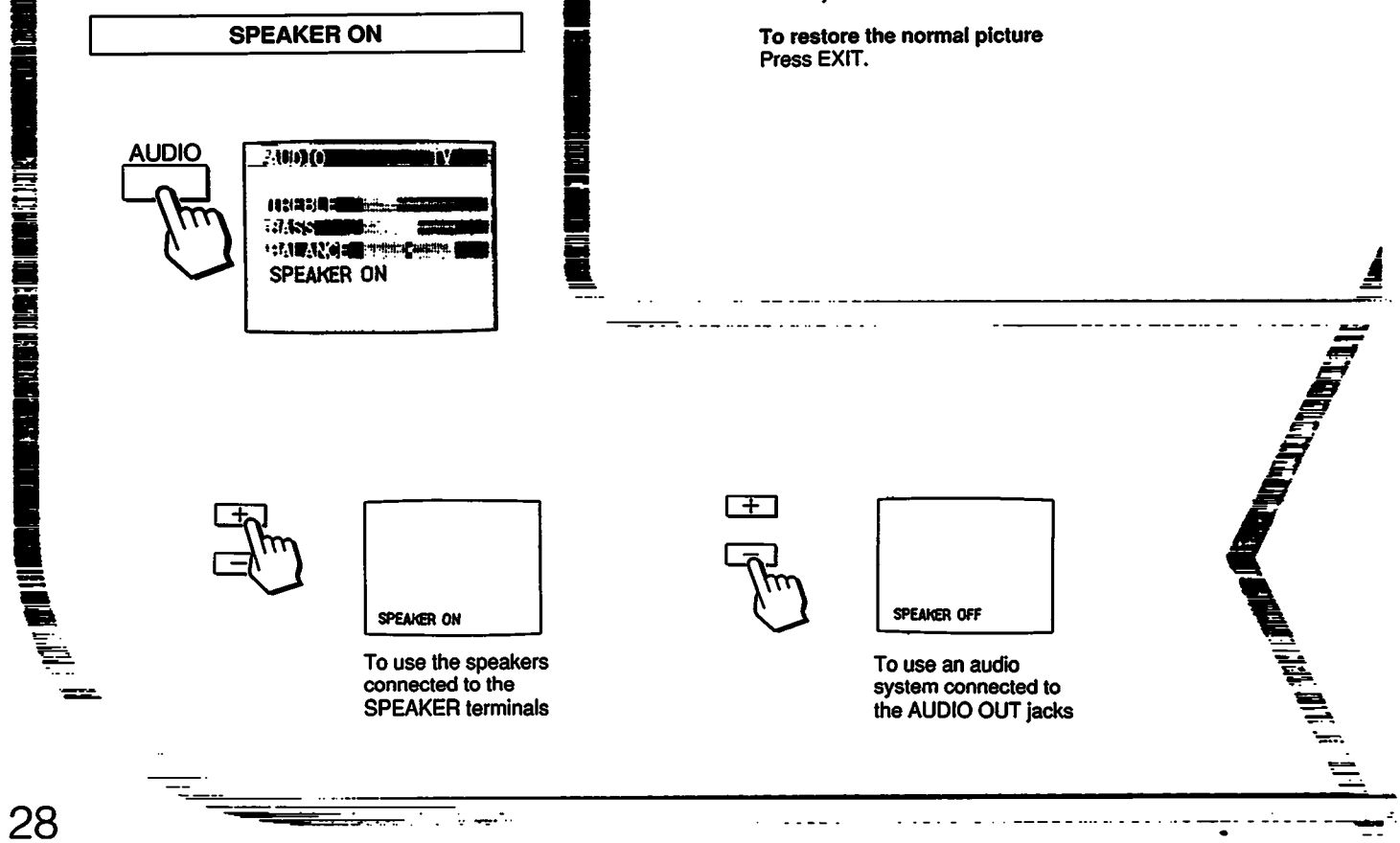
Adjusting the Sound

Press AUDIO repeatedly until the on-screen display of the item to be adjusted appears.

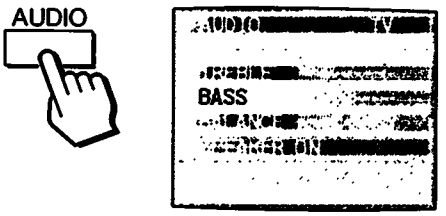


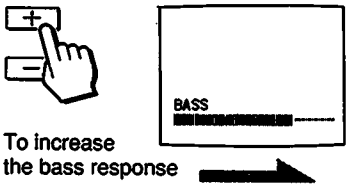
To restore the factory preset levels
Press RESET.
The adjustment levels will be cleared at once.

To restore the normal picture
Press EXIT.

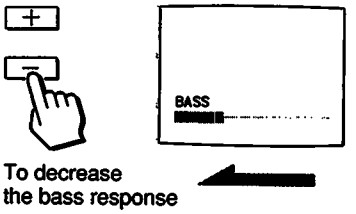

SPEAKER ON
AUDIO
SPEAKER ON
SPEAKER ON
To use the speakers connected to the SPEAKER terminals
SPEAKER OFF
To use an audio system connected to the AUDIO OUT jacks

BASS



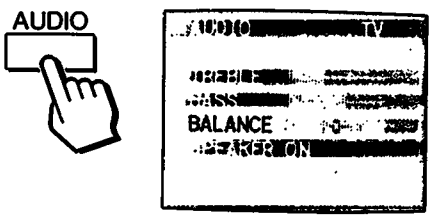


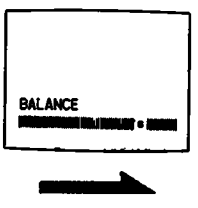
To increase
the bass response



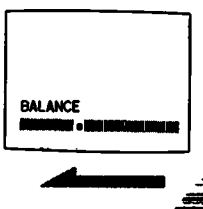
To decrease
the bass response

BALANCE





To emphasize
the right
speaker's volume

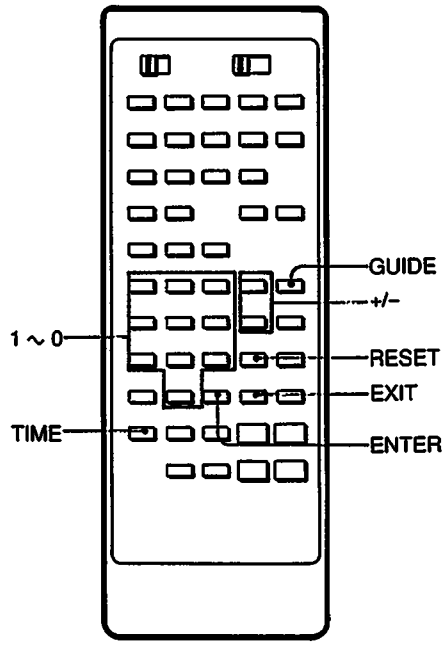


To emphasize
the left
speaker's volume

Using the GUIDE Function

The GUIDE function calls up the on-screen menu and instructions on how to set the current time, timer and channel block.

Buttons used for the GUIDE function

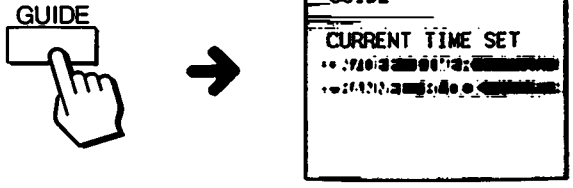


- All settings will be erased from the unit's memory if the unit is unplugged, or if a power failure occurs.
- The ON/OFF TIMER and CHANNEL BLOCK will operate only if the clock is set correctly.

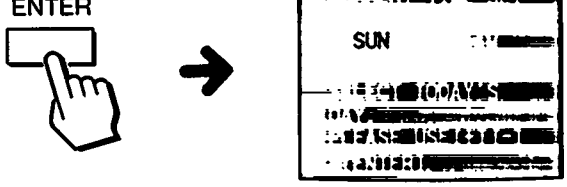
Setting the Clock

Example: To set the clock to 5:30 PM, Monday.

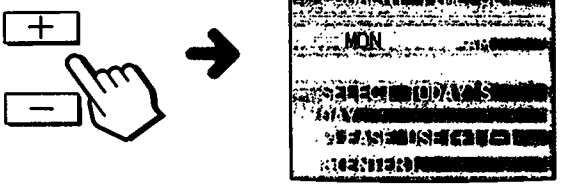
1 **Press GUIDE.**
Press repeatedly until "CURRENT TIME SET" turns red.



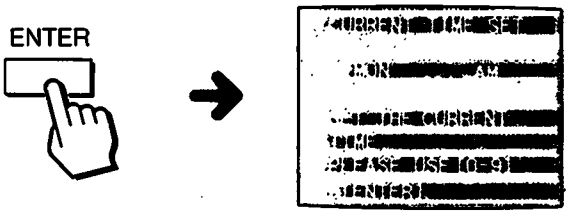
2 **Press ENTER.**



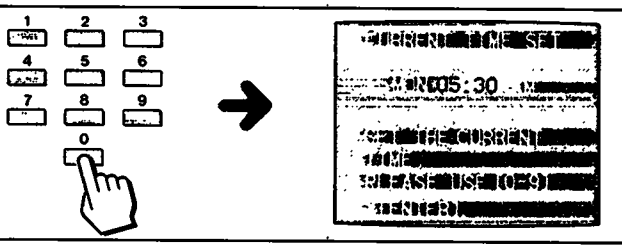
3 **Press +/– until the desired day of the week appears.**



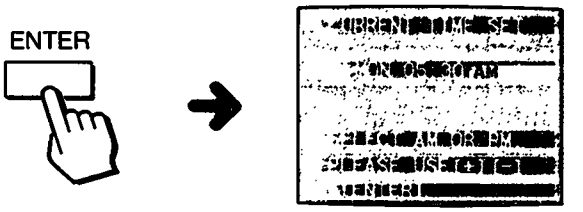
4 **Press ENTER.**
If the time is already set, the current set time will appear.
To clear these numbers, press any number.



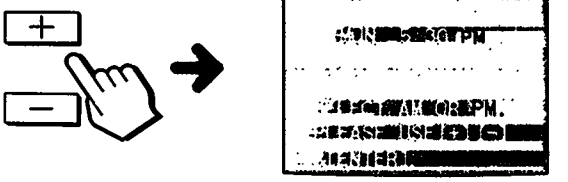
5 **Press 0 – 9 to set the desired time.**
(For 5:30, press 0, 5, 3, 0)



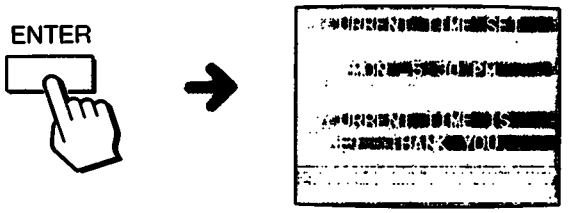
6 **Press ENTER.**



7 **Press +/– to set AM or PM.**



8 **Press ENTER.**
The moment ENTER is pressed, the clock will start. Now, the clock is set. The indication will disappear after approx. 5 seconds.



To restore the normal picture
Press EXIT.

To clear the current time setting
Display the "CURRENT TIME SET" page and press RESET, then EXIT.

To reset the setting
Display the "CURRENT TIME SET" page and press RESET, then repeat steps 3 to 8.

To display the current time
Press TIME.

Notes

- The internal clock of this TV operates on a 12-hour cycle. If a 24-hour cycle number is entered, it will be cleared when ENTER is pressed.

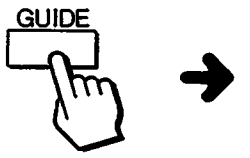
12:00 AM stands for midnight.
12:00 PM stands for noon.

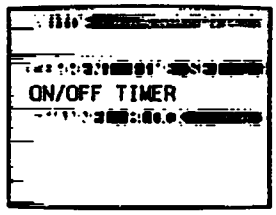
- The internal clock returns to the factory-set condition if the unit is unplugged, or if a power failure occurs. Reset the current time.

Setting the ON/OFF Timer

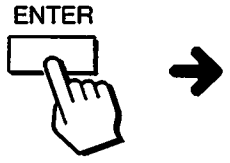
The ON/OFF timer allows the program of your choice to appear on the screen at the desired time.
Example: Set the timer to turn on the TV to channel 8 at 1:00 PM for 3 hours every Monday through Friday.

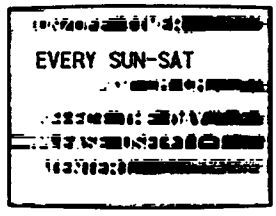
1 **Press GUIDE.**
Press repeatedly until "ON/OFF TIMER" turns red.



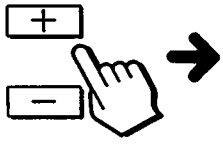


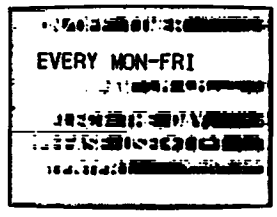
2 **Press ENTER.**
If the clock has not been set, "PLEASE SET CURRENT TIME FIRST" appears on the screen. Go back to page 30.



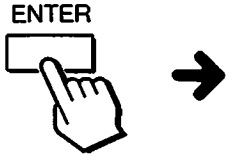


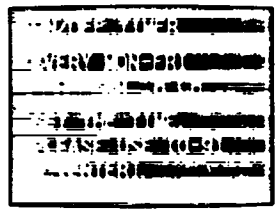
3 **Press +/– until the desired day of the week appears.**



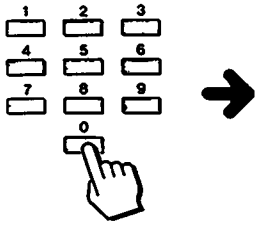


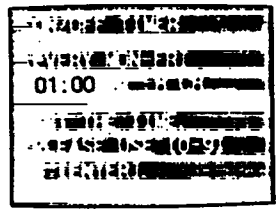
4 **Press ENTER.**



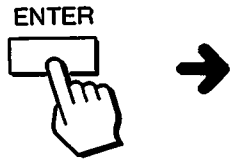


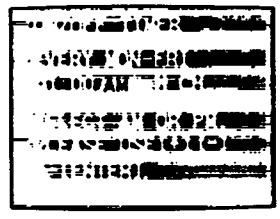
5 **Press 0 – 9 to set the desired time.**
(For 1:00, press 0, 1, 0, 0.)



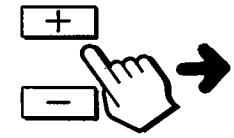


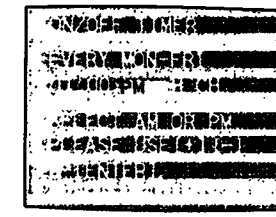
6 **Press ENTER.**



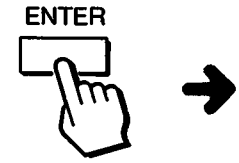


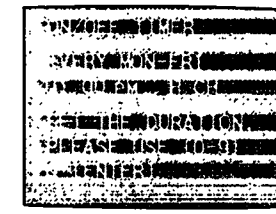
7 **Press +/– to set AM or PM.**



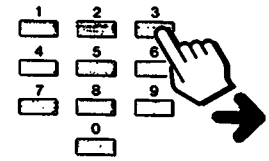


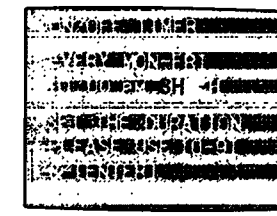
8 **Press ENTER.**



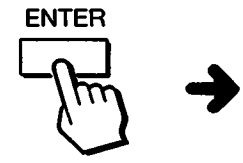


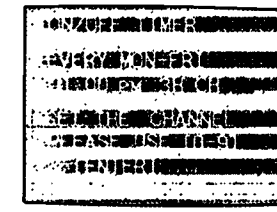
9 **Press a channel number button to set the duration.** (Up to 9 hours can be set).



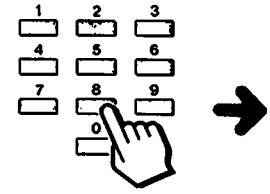


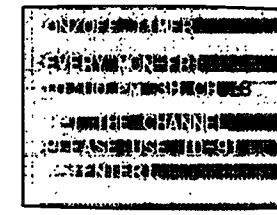
10 **Press ENTER.**



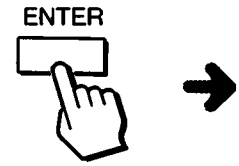


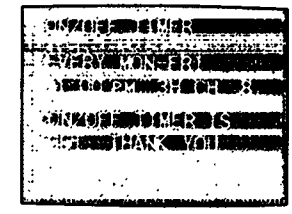
11 **Press 0 – 9 to set the desired channel number.**





12 **Press ENTER.**
Now the ON/OFF timer is set.
The TIMER indicator on the TV lights up.



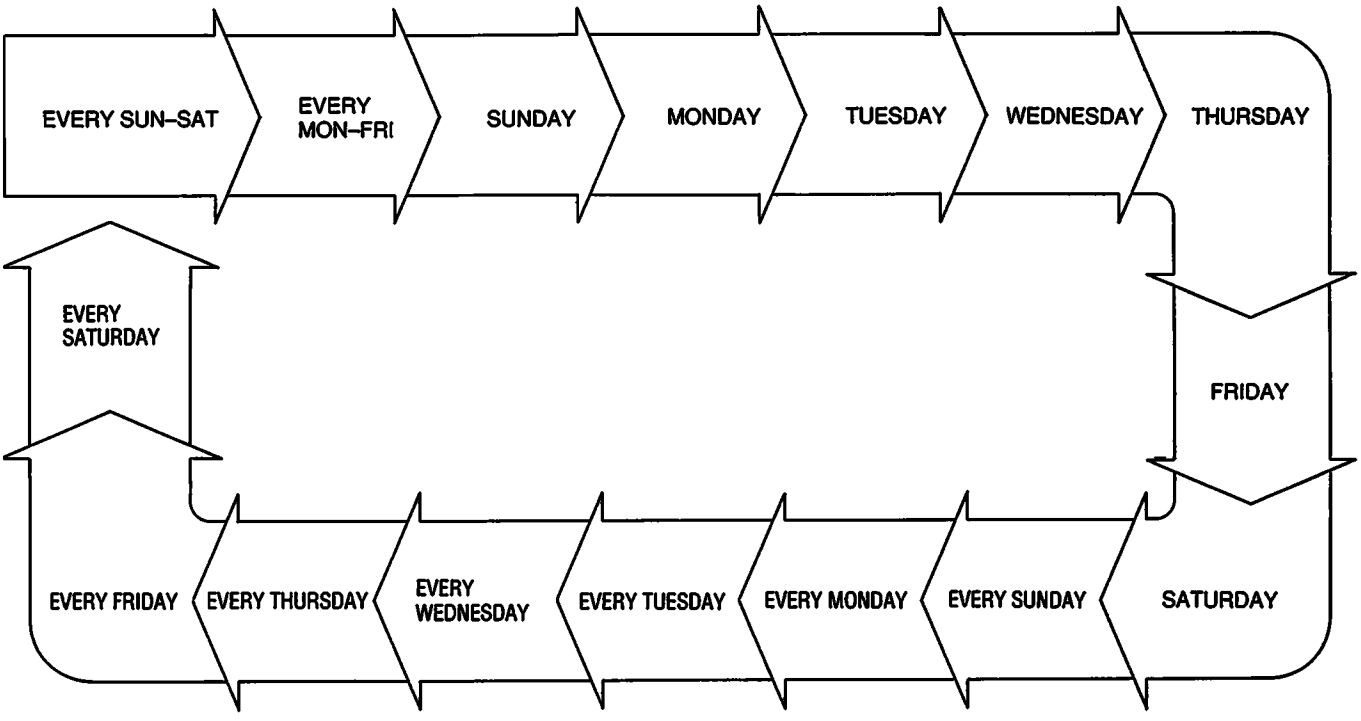


To restore the normal picture
Press EXIT.

To clear the setting
Display the "ON/OFF TIMER" page and press RESET, then EXIT.

To reset the setting
Display the "ON/OFF TIMER" page and press RESET, then repeat steps 3 to 12.
The "TIMER WILL BE OFF" indication will appear one minute before the timer goes off.

Notes
- Power back-up is not available. Both the clock and timer settings are erased if a power failure occurs. Reset the current time, then set the timer.
- The selectable days will appear in the following order when you press [+]:

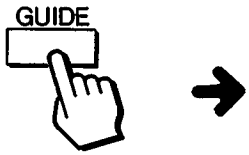


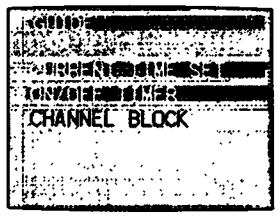
Press [–] for the reverse direction.

Setting the Channel Block

The channel block prevents a channel from appearing on the screen for preset hours. We suggest you use this function to prevent children from watching undesirable programs.
Example: Set the channel block at 4:00 PM (for 1 hour), every Saturday,on channel 12.

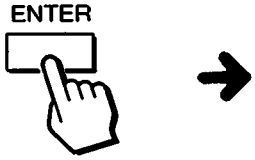
1 **Press GUIDE.**
Press repeatedly until "CHANNEL BLOCK" turns red.

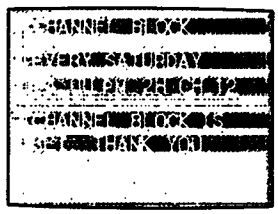




Step 2—11: Same as Setting the ON/OFF Timer. (See page 32.)

12 **Press ENTER.**
Now CHANNEL BLOCK is set.
At the preset time, the picture of the selected channel will be blocked from view and the sound will be muted. A red "BLOCKED" indication will appear on the screen while the channel is blocked.





To restore the normal picture
Press EXIT.

To clear the setting
Display the "CHANNEL BLOCK" page and press RESET, then EXIT.

To reset the setting
Display the "CHANNEL BLOCK" page and repeat the steps from the beginning.

Specifications

Television system American TV standards
Channel coverage VHF: 2–13
UHF: 14–69
Cable TV: 1–125
Picture tube Microblack Trinitron tube
20-inch picture measured diagonally
21-inch picture tube measured diagonally (KV-20EXR10)
27-inch picture measured diagonally
28-inch picture tube measured diagonally (KV-27EXR10/27EXR15)
Antenna 75-ohm external antenna terminal for VHF/UHF
Input VIDEO 1 and 2 IN
S VIDEO IN (4-pin mini DIN)
Y: 1 Vp-p, 75-ohms unbalanced, sync negative
C: 0.286 Vp-p (Burst signal), 75-ohms
Video (phono jacks): 1 Vp-p, 75-ohms unbalanced, sync negative
Audio (phono jacks): 500 mVrms (100% modulation)
Impedance: 47 kilohms
Output VIDEO 2 OUT
Video (phono jack): 75-ohms unbalanced, sync negative
Audio (phono jacks):
Impedance: 10 kilohms
AUDIO OUT (VARIABLE)
(phono jacks)
More than 408 mVrms at the maximum volume setting (variable)
Impedance: 5 kilohms
Speaker output 5 W × 2
Power requirements 120 V AC, 60 Hz
Power consumption

	Max.	Standby
KV-20EXR10	130 W	1.5 W
KV-27EXR10	160 W	
KV-27EXR15	165 W	

Accessories supplied
(KV-20EXR10/27EXR10)
Remote Commander RM-771 with 2 size AA (R6) EVEREADY batteries (1)
(KV-27EXR15)
Remote Commander RM-772 with 2 size AA (R6) EVEREADY batteries (1)
Antenna connector (1)
Recommended accessories
U/V mixer EAC-66
Connecting cable VMC-810/820S, YC-15 V/30 V
Video rack SU-275

Design and specifications are subject to change without notice.

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Troubleshooting

Disturbances in picture and sound can often be eliminated by checking the symptoms and following the suggestions listed below.

SYMPTOM	CHECK AND ADJUST
Poor or no picture (screen not lit), good sound	• Adjust PICTURE. • Adjust BRIGHT. • Check antenna/cable connections.
Good picture, no sound	• Press VOLUME + on the TV or VOL + on the Remote Commander. • Press MUTING on the Remote Commander. • Check that the MTS button is set correctly. • Check that the TV/VIDEO button is set correctly. • Check that "SPEAKER ON" is set. • Check that the speaker cords are connected to the SPEAKER terminals.
No picture (screen not lit), no sound	• Is POWER switched on? • Plug the unit into a wall outlet. • Check that the TV/VIDEO button is set correctly.
No color	• Is it a color program? • Adjust COLOR.
Snow and noise only	• Is it an active or the correct channel? • Check the CABLE setting. • Check antenna/cable connections.
Dotted lines or stripes	This is often caused by local interference. (e.g. cars, neon signs, hairdryers etc.) Adjust the antenna for minimum interference.
Double images or ghosts	Reflections from nearby mountains or buildings often cause this problem. A highly directional outdoor antenna or a CATV cable may improve the picture.
Try another channel. It could be station trouble.	

If the problem persists, contact your nearest service facility.